

**RECEIVED
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Application Number: 10/711,374
Filing Date: 09/14/2004
Title: Optical Switch
Applicant: Sicklinger, Todd Clifford
Examiner: Michael P. Mooney
Art Unit: 2883
Confirmation Number: 5373

This is a reply to a first office action mailed on December 15, 2005.

A three month extension of time is requested and the \$510.00 extension fee is included herewith by means of a credit card payment (Credit Card Payment Form PTO-2038 is attached hereto).

Prior to entry of this amendment, Claims 1-12 were pending the application. Pursuant to this amendment, Claims 1, 2, 7, 8, and 9 have been amended and Claims 10-12 have been cancelled. Accordingly, Claims 1-9 are currently pending in this application. A claim list is showing the amendments made is provided below.

Discussion

The Examiner rejected Claims 1-12 as allegedly being anticipated or obvious in view of three cited references: US Patent 4,615,588 ("Goldhar"); US Patent 5,293,397 ("Veligdan"); and US Patent 6,374,018 ("Okayama"). However, the cited references, either alone or in combination, do not teach all of the elements of any of the claims.

Goldhar is directed to a transparent electrode that is comprised of plasma. This plasma electrode is used to apply an electric charge to a Pockels cell, which is being used as a large diameter optical switch. However, the plasma electrode is not used as an optical switch and it does not alter the path of a light ray.

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Neither Veligdan nor Okayama discloses the use of plasma (a highly ionized gas) as an element in an optical switch. Both use semiconductor material and not a gas as the optically active elements of their switches. Since the index of refraction in certain semiconductor materials can be altered by generating free charge carriers in the material, this change in index of refraction is sometimes referred to as the "plasma effect." Occasionally, as in Veligdan, the term "plasma" is loosely applied to such material. However, semiconductor materials are not plasmas and they have many inherent characteristics that are different than those of plasmas.

The claims have been amended to more clearly identify that the present invention is directed to a gas-plasma and that said gas-plasma performs the switching function. Since the references, either alone or in combination, do not disclose at least these elements, the claims are not anticipated and the examiner cannot make a *prima facie* case of obviousness. Accordingly, it is requested that the examiner withdraw his rejections and allow the pending claims (Claims 1-9).


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